

**FINDING OF NO SIGNIFICANT IMPACT**  
**DEPARTMENT OF ENERGY LOAN GUARANTEE TO MOJAVE SOLAR, LLC, FOR**  
**CONSTRUCTION OF A 250-MEGAWATT NET OUTPUT SOLAR POWER PLANT IN**  
**SAN BERNARDINO COUNTY, CA**

**AGENCY:** U.S. Department of Energy, Loan Guarantee Program Office

**ACTION:** Finding of No Significant Impact

**SUMMARY:** The U.S. Department of Energy (DOE) has conducted an environmental assessment (EA) that analyzed the potential environmental impacts associated with issuing Mojave Solar a loan guarantee that would be used for the construction and start-up of the Abengoa Mojave Solar Project (AMSP), and ancillary facilities. The AMSP would be a trough solar power-generating plant (solar thermal plant), located on private land approximately 25 miles northwest of the city of Barstow, California. The proposed action would result in development of the AMSP, as well as the proposed Lockhart substation, interconnection to an existing transmission line, and fiber-optic telecommunication lines linking the plant to various substations in the region. Approximately 17 miles of the 85-mile proposed fiber-optic telecommunication network crosses lands managed by the U.S. Department of the Interior, Bureau of Land Management (BLM). BLM is a cooperating agency for the proposed action, in accordance with a Memorandum of Understanding between DOE and BLM, signed in January 2010. The DOE proposed action is to issue Mojave Solar a loan guarantee that would be used for the construction of the AMSP and necessary supporting infrastructure. The BLM proposed action is the issuance of right-of-ways to support the AMSP.

DOE, through its Loan Guarantee Program Office (LGPO), proposes to provide a Federal loan guarantee<sup>1</sup> pursuant to Title XVII of the Energy Policy Act of 2005 (EPAct or the Act), as amended by section 406 of the American Recovery and Reinvestment Act of 2009, to Mojave Solar to support the construction of the proposed solar power-generating plant. The purpose and need for agency action is to comply with DOE's mandate under EPAct, by selecting eligible projects that meet the goals of the Act.

The proposed AMSP would use modular line-focus parabolic trough solar collector assemblies that use the sun's energy to heat a Heat Transfer Fluid (HTF) carried in receiver tubes positioned at the focal point of the parabolic trough collectors. In turn, the HTF, once sufficiently heated, would generate steam via heat exchangers, which would drive a conventional steam turbine generator set. The facility would generate a combined net nominal electrical input of 250 megawatts from twin, independently operable solar fields, each feeding a 125 megawatt power island. Each solar field would have 1,128 parabolic trough collectors, consisting of support structures, mirrors, receiver tubes, and drive systems.

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<sup>1</sup> The amount requested for the loan guarantee is not being disclosed at this time because it is business sensitive. Moreover, should DOE approve a loan guarantee, the amount may differ from the original request.

The AMSP is expected to generate approximately 600,000 megawatt hours of electricity per year, sufficient to power approximately 70,000 homes. Assuming that this capacity displaces electricity produced by conventional power plants, DOE estimates that the proposed project would reduce the generation of greenhouse gases from those plants by 299,000 metric tons annually.

Mojave Solar submitted an Application for Certification for the AMSP to the California Energy Commission (CEC) on August 10, 2009. CEC issued the final CEC License Decision on September 8, 2010. The CEC does not license or certify transmission facilities. The California Public Utilities Commission (CPUC) is responsible for the approval of transmission lines and, consequently, assumed the role of lead agency for compliance with the required California Environmental Quality Act (CEQA) review of the construction of the proposed fiber optic upgrades on existing transmission lines. The draft CPUC analysis has been released for public comment, received no substantive comments, and is in the final stages of completion. A final Mitigated Negative Declaration pursuant to CEQA is expected to be issued in August 2011, which, in conjunction with the adoption of the Abengoa Final Environmental Assessment (Final EA), will complete the required State review.

All discussion and analysis related to the potential impacts of construction and operation of the proposed manufacturing facility and leasing of an existing facility are contained in the Final EA (DOE/EA-1798), which is incorporated herein by reference. DOE examined potential impacts on the following resources and found none to be significant: land use; visual resources; air quality; noise; geology and seismicity; water resources; biological resources; cultural resources; socioeconomics and environmental justice; public health and safety, including terrorism-related impacts; and cumulative effects, including global climate change.

Groundwater resources are limited in the Mojave River Groundwater Basin (location of the proposed project). Groundwater use within the Basin is subject to the regulatory authority of the Mojave Water Agency (MWA) to ensure protection and preservation of the resource. As part of CEC's licensing process, CEC, MWA and the Mojave Solar's technical staff conducted extensive evaluations of the proposed facility and its potential to have detrimental impacts on groundwater. As a result of the evaluation, CEC, MWA and Mojave Solar have agreed to groundwater use limits, and monitoring and reporting requirements as part of the CEC permit. DOE technical staff has conducted a thorough review of the technical documentation, and have determined:

- A cumulative impacts study on future water use in the Harper Valley Groundwater Basin showed that a groundwater level surplus exists compared to the Production Safe Yield.<sup>2</sup>
- Alternate technologies to reduce reliance on groundwater supplies were evaluated and eliminated from further consideration when CEC determined that, on balance, compelling environmental benefit did not exist compared to the proposed technology;

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<sup>2</sup> The Production Safe Yield is defined as the calculated highest annual production that will not result in the long-term decline in Basin water levels. The surplus was determined by comparing cumulative water use (including current production levels, the effects of the AMSP, and the effects of four proposed projects) with the Production Safe Yield.

- Conservation measures to preserve the valuable resource have been incorporated into the project design; and
- Monitoring and reporting to the MWA will provide the agency with sufficient information to manage and regulate groundwater resources in a manner that will prevent damage to the aquifer levels.

In accordance with section 7 of the Endangered Species Act of 1973, as amended (15 U.S.C. 1531 *et seq.*), on October 4, 2010, DOE initiated a formal Section 7 consultation with the U.S. Fish and Wildlife Service on the effects of the AMSP and supporting infrastructure on the federally protected threatened desert tortoise (*Gopherus agassizii*). On March 17, 2011, after reviewing the status of the desert tortoise, the environmental baseline for the action area, the effects of the proposed action, and the cumulative effects, U.S. Fish and Wildlife issued a biological opinion stating that the proposed action is not likely to jeopardize the continued existence of the desert tortoise.

On June 27, 2011, a review under section 106 of the National Historic Preservation Act was completed for the AMSP. The California State Historic Preservation Office concurred with DOE's Finding of No Adverse Effects, subject to the following conditions:

- An archeological monitor must be present during all ground disturbance activities;
- A Native American monitor must be present during all ground disturbance activities; and
- Utility upgrade activities, and all equipment in the utility upgrade corridor, must stay on existing access roads at all times.

Tribal consultation will be ongoing throughout the construction of the proposed project.

In accordance with applicable regulations and policies, DOE sent a notification letter regarding its determination to prepare an EA to the California State Clearinghouse, San Bernardino County and the City of Barstow on June 21, 2010. The letter described the proposed action and stated that a Draft EA would be sent to the State for review. On April 4, 2011, DOE sent the Draft EA to the California State Clearinghouse, San Bernardino County, the City of Barstow, and to several potentially affected American Indian Tribes to invite their comments on the Draft EA. The Draft EA was also posted on the Loan Programs Office website. A total of two comment letters were received from the following agencies: the U.S. Environmental Protection Agency, Region IX, and the State of California Native American Heritage Commission. The Environmental Protection Agency, Region IX, was generally concerned with the alternatives analysis in the Draft EA; questioned whether a dry-cooling alternative had been analyzed; and inquired as to planned conservation measures to preserve groundwater resources. The Native American Heritage Commission (NAHC) indicated that a NAHC Sacred Lands File Search did not identify Native American cultural resources in the 'area of potential effect,' and provided a list of Native American Tribes with whom outreach should occur. The comment letters and responses to comments are included in Appendix T to the Final EA.

**DETERMINATION:** On the basis of the Final EA, DOE has determined that providing a Federal loan guarantee to Mojave Solar to support the construction of the proposed solar power

generating plant and supporting infrastructure in San Bernardino County, California, will not have a significant effect on the human environment. The preparation of an environmental impact statement is therefore not required, and DOE is issuing this Finding of No Significant Impact.

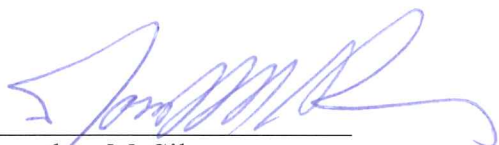
Copies of the Final EA are available at the DOE Loan Programs Office website at [http://lpo.energy.gov/?page\\_id=1514](http://lpo.energy.gov/?page_id=1514) or from:

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Additional information on the DOE NEPA process is available from

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Issued in Washington, DC on the 8<sup>th</sup> day of July in the year 2011

  
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Jonathan M. Silver  
Executive Director, Loan Programs Office